

ABSTRACT

ELECTRICAL NEUROMUSCULAR STIMULATOR FOR MEASURING
MUSCLE RESPONSES TO ELECTRICAL STIMULATION PULSES

The electrical stimulator includes an electrical pulse generator arranged in a case, stimulation electrodes (7) to be placed on a user's skin on the motor points of the muscles to be stimulated, each electrode (7) being connected to an electric cable (5) connector, the other end of the cable being connected in a removable manner to a
5 signal input and/or output socket of the case for receiving the electric pulses, at least one sensor (11) for measuring the muscle reactions caused by the electric pulses, and electronic means in the case for receiving the measurements from the sensor. The sensor (11) is intrinsically linked to one of the electrodes (7) or to the connector (6). At least one conductor wire (15) of the cable connects the electrode (7) independently of
10 the sensor (11).

The stimulator finds application in particular in the field of sports for the passive exercising of muscles stimulated by electric pulses, or in the re-education of atrophied muscles. In this case, the sensor (11) is used to provide data as to the reactivity of the stimulated muscles and their fatigue level. This data is seen on a display of the
15 stimulator and is used to adjust the stimulation parameters manually or automatically.

Figure 2

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